An Ecosystem Approach to Management of Seamounts in the Southern Indian Ocean

Volume 4 – A Road Map towards sustainable use and conservation of biodiversity in the Southern Indian Ocean

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Acronyms used in the text

ABNJ	Areas Beyond National Jurisdiction
ACAP	Agreement on the Conservation of Albatrosses and Petrels
ASCLME	Agulhas and Somali Current Large Marine Ecosystem
BIOS	Bermuda Institute for Ocean Sciences
BMP	Biodiversity Management Plan
BMPS	Biodiversity Management Plan Secretariat
BUEI	Bermuda Underwater Exploration Institute
CBD	Convention on Biological Diversity
CCAMLR	Convention for the Conservation of Antarctic Living Marine Resources
CenSeam	The Census of Marine Life field programme on seamounts
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CLIVAR	World Climate Research Programme, Climate Variability and Predictability Project
CMS	Convention on Migratory Species (Bonn Convention)
COMRA	China Ocean Mineral Resources Research and Development Association
CSIRO	Commonwealth Scientific and Industrial Research Organization, Australia
DOALOS	(United Nations) Division for Ocean Affairs and the Law of the Sea
EBSA	Ecologically or Biologically Significant Marine Area
EEZ	Exclusive Economic Zone
FAO	Food and Agriculture Organization of the United Nations
GEF	Global Environment Facility
IGO	Intergovernmental organization
IMMS	International Marine Minerals Society
IMO	International Maritime Organization
IOC	Indian Ocean Commission, usually known as the Commission de l'Océan Indien (COI)
IOGOOS	Global Ocean Observing System for the Indian Ocean
IOTC	Indian Ocean Tuna Commission
IPOA-IUU	International plan of action to prevent, deter and eliminate illegal, unreported and unregulated fishing
IRD	Institute of Research for Development (France)
ISA	International Seabed Authority
ITLOS	International Tribunal for the Law of the Sea
IUCN	International Union for the Conservation of Nature
IUU	Illegal, Unreported, Unregulated *fishing*
IWC	International Whaling Commission
JPOI	Johannesburg Plan of Implementation
LME	Large Marine Ecosystem
LOSC	Law of the Sea Convention
MCS	Monitoring, control and surveillance
MEP	Marine environmental protection
MMA	Marine Managed Area
MoU	Memorandum of Understanding
MPA	Marine Protected Area
MSY	Maximum sustainable yield
NEAFC	North East Atlantic Fisheries Commission
NGO	Non-governmental organization
NIOZ	Royal Netherlands Institute for Marine Research
NIWA	National Institute of Water and Atmospheric Research, New Zealand
NOAA	National Oceanic and Atmospheric Administration (USA)
OSPAR	Convention for the Protection of the North-East Atlantic
PSSA	Particularly Sensitive Sea Areas under the IMO
RFMO	Regional Fisheries Management Organisation
SIBER	Sustained Indian Ocean Biogeochemistry and Ecosystem Research
SIO	Southern Indian Ocean
SIODFA	Southern Indian Ocean Deepsea Fishers Association
SIOFA	South Indian Ocean Fisheries Agreement
SSA	Sargasso Sea Alliance
SWIOFC	South West Indian Ocean Fisheries Commission
SWIOFP	South West Indian Ocean Fisheries Project (GEF, World Bank)
SWIR	Southwest Indian Ridge
UNCED	United Nations Conference on Environment and Development
UNCLOS	United Nations Convention on the Law of the Sea
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFSA	United Nations Fish Stocks Agreement
UNGA	United Nations General Assembly
VME	Vulnerable marine ecosystem
WCPA	World Commission on Protected Areas
WIOMSA	Western Indian Ocean Marine Science Association
WIOSEA	Western Indian Ocean Sustainable Ecosystem Alliance
WIOSSA	Western Indian Ocean Sustainable Seas Alliance
WOC	World Ocean Council
WSSD	World Summit on Sustainable Development
WWF	World Wide Fund For Nature

Executive Summary

Marine features such as seamounts are important geomorphological structures sustaining marine benthic and pelagic ecosystems. They are fragile and remain poorly known. They cover close to 17 million km^2 of the ocean and sea area, while tropical forests cover 10 million km^2 of the entire Earth surface. They are important for seabirds, marine mammals and numerous pelagic and benthic, resident and migratory species, and are hotspots of biological activity. There is increasing scientific evidence of and concern about the significant adverse impacts on seamounts from fisheries and other extractive human activities both at present (e.g. precious coral exploitation) and in the future (e.g. cobalt-rich ferromanganese crusts and polymetallic sulphide mining, oil and gas extraction).

IUCN and its Members have a long-standing commitment to achieving effective protection, restoration and sustainable use of biological diversity and ecosystem processes on the high seas. This commitment was reiterated at the 2008 IUCN World Conservation Congress and again at the 2012 World Conservation Congress, which called on States, acting individually or though multilateral organizations, to promote consistent, coordinated and coherent application of the best conservation and governance principles and approaches.

Within the framework of an IUCN/GEF/UNDP Southern Indian Ocean (SIO) Project, IUCN organized in Rome, on 16–17 July 2012, a Management Workshop on conservation and management measures applicable to high seas areas in the SIO. The objectives were to: (i) define the different elements of a governance plan for the region (specific objectives, actors, actions required for its implementation); and (ii) discuss ways towards achieving an operational management plan for the SIO (develop considerations for an ecosystem approach, identify options for monitoring, control and surveillance, etc.).

This document briefly presents the proposals from the Management Workshop regarding: (i) a **Biodiversity Initiative**; (ii) the principles, objectives and process included in the draft **Road Map** developed in support of the Initiative; (iii) the concept, advantages and potential members of the **Alliance** proposed to further develop the Initiative; and (iv) the **Collaborative Arrangement** needed to formalize the Alliance, and the key elements of the adaptive and collaborative **Management Plan** that the Alliance will adopt and implement.

The SIO Biodiversity Initiative

Institutionally benign and neutral, the SIO Initiative is informal and voluntary. It intends to promote integrated management of biodiversity in the SIO and to mobilize existing and potential interested parties for that endeavour. It serves as a reference point and holds together the first partners at this early stage of the process, while no other formal mechanism is yet established.

The Initiative will operate under the following principles:

- Duty to cooperate
- Openness
- Duty to promote sustainable and equitable use
- Focus on biodiversity and the activities impacting upon it
- Good governance
- Consensus decision-making
- Realism
- Broad participation.

Its goals will include: promotion of integrated management and sustainable use; identification of partners for an Alliance in that endeavour; and facilitation of the Road Map and Management Planning processes (see below).

The Road Map

The Road Map is the document, informally agreed among the partners, that underpins the process of participative development, adoption and implementation of the Management Plan. It indicates the objectives, the expected outputs, the partners and their respective roles, the means available, and the calendar for the activities. The expected outcomes include: (i) a voluntary alliance

of partners (the SIO Alliance); a Collaborative Arrangement between these partners (the SIO Arrangement); and an SIO Management Plan formally adopted by the Alliance, under the SIO Arrangement. The process will be facilitated by IUCN. Following an inception meeting at which the SIO Alliance will be established, the Road Map partners will agree on the aims and objectives of their process, and will elaborate a Management Plan.

The SIO Alliance

The governance and management of biodiversity in the SIO can now more efficiently move forward through a voluntary association of existing institutions from interested States and other interested parties (e.g. from among the private sector and civil society) in the form of an Alliance, following the examples of the Sargasso Sea Alliance (SSA) and the Western Indian Ocean Sustainable Ecosystem Alliance (WIOSEA). The Alliance is conceived as open and flexible, implying a light administrative burden on members. Recognizing the existing mandates of the different partners, it will offer a platform for synergy, with a strong shared focus: the Management Plan. Potential members include a wide range of States, multilateral organizations and other stakeholders drawn from civil society.

The Collaborative Arrangement

This is a non-legally binding agreement signed by all members of the Alliance to implement together the Biodiversity Management Plan. It morally engages only its signatories. A draft structure for the Management Plan, as referred to below, could be part of the Arrangement. Because of its objective, the Collaborative Arrangement is intended to be a long-lasting institution, requiring constancy and coherence in the commitment and action of its signatories. Additional members might be added as time goes by.

The Biodiversity Management Plan

The Management Plan contains the details of the agreement among Alliance members and defines their joint action. Its structure will be determined by the Alliance. The Management Plan is a long-term commitment among the partners aiming at conservation and sustainable use of biodiversity in the designated area. The Plan's general objective is to elaborate implementable action for the protection, conservation and sustainable use of seamount-related biodiversity in the area to be defined within the Plan. This, in turn, implies a number of sub-objectives and milestones to be agreed by Alliance members. The content of the Plan and the boundaries of the area to be managed have been succinctly outlined but will be decided by Alliance members. The legal frameworks and relevant institutions from the region include: UNCLOS, UNFSA, CCAMLR, SIOFA, SWIOFC, IOTC and CBD. The Management Plan will describe the management area and biodiversity targets, the actual and potential economic activities impacting upon biodiversity, and will define objectives in this regard and identify means and financing sources.

Final considerations

The Road Map needs to be kept simple and practical. It should be locally driven (e.g. by the interested parties from the region or those operating in it). Its development and implementation will follow a step-by-step approach and will identify short-term, medium-term and long-term action. The adaptive Management Plan might be tested first in pilot projects before being scaled up. Effective international cooperation is essential and while the full process may take some time, it is important to begin and show that implementation is feasible.

The role of IUCN in starting and facilitating the project is essential. The Alliance will pool the competencies available in the region. Participation of the sector and existing international institution is essential. Last but not least, the Initiative cannot begin to make progress without the appropriate funding. Therefore one of the most important tasks for IUCN, assisted by its Members, will be to raise the funding necessary to conclude the Road Map and start implementing the Management Plan, which should also identify long-term funding sources.

Introduction

Oceans have a key role in the Earth's dynamic, sustaining life on the blue planet, regulating climate and feeding humanity. Economic activities are spreading into the ocean at an accelerating rate, affecting already and potentially important resources and services that the ocean ecosystem can provide. Some ecosystem structures and some species are particularly vulnerable.

Marine features such as seamounts are important geomorphological structures which sustain marine benthic and pelagic ecosystems. They are fragile and remain poorly known. They cover close to 17 million km^2 of the ocean and sea area, while tropical forests cover 10 million km^2 of the entire Earth surface. They are important for seabirds, marine mammals and numerous pelagic and benthic, resident and migratory species, and are hotspots of biological activity. There is increasing scientific evidence of and concern about the significant adverse impacts on seamounts from fisheries and other extractive human activities, both at present (e.g. precious coral exploitation) and in the future (e.g. cobalt-rich ferromanganese crusts and polymetallic sulphide mining, oil and gas extraction).

The 1982 Convention on the Law of the Sea (UNCLOS) imposes an obligation on signatory States "to protect and preserve the marine environment". This obligation covers the high seas as well as coastal waters. The 1982 Convention also provides the legal foundation for the management of sustainable use and conservation of ocean resources and biodiversity. On the high seas, States have the obligation to adopt with respect to their nationals measures for the conservation of living resources (particularly under Article 117). This duty is strengthened by the 1995 UNFSA and the 1993 FAO Compliance Agreement. In the SWIO area, the framework has been recently strengthened with the coming into force, in June 2012, of the South Indian Ocean Fisheries Agreement (SIOFA). UNCLOS is echoed and specified in a number of instruments, such as:

- the FAO Code of Conduct for Responsible Fisheries, its technical guidelines for the precautionary approach and the ecosystem approach to fisheries and its International Guidelines for the Management of Deep-sea Fisheries in the High Seas;
- United Nations Resolutions 61/105 and 64/72 in a specific manner and in relation to governance; and
- the Convention on Biological Diversity (CBD) Aichi Targets, particularly No. 6 on sustainable fisheries and No. 11 on Marine Protected Areas (MPAs, adopted in 2010 with the Strategic Plan for Biodiversity 2011–2020).

International collaboration plays a fundamental role in the implementation of these instruments. At international level, the role of the UN system (the UNGA, DOALOS, FAO, UNEP, CBD, IMO, ISBA, IOC, UNESCO, etc.) is important. In the absence of an implementation agreement for UNCLOS on high seas biodiversity, regional collaboration is essential. In that context, the potential role of the Regional Seas Programme of UNEP and of the Regional Fisheries Management Organizations (RFMOs) cannot be overstated, although few have actually taken effective measures in this regard. Of particular interest to the region (and in many ways the exception that confirms the rule) is the role played by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), its scientific programmes, its efforts towards management of sustainable fisheries and protection of biodiversity, including the development of a regional MPA network (not yet established).

Reiterating many of the important commitments made at UNCED in 1992 and at the WSSD in 2002, the Rio+20 Summit agreed to a number of (non-legally binding) commitments, many of which are central to the conservation and sustainable use of biodiversity (see Annex 2).

The private sector (and particularly the fishery sector) is a major stakeholder in the region, and its participation is crucial for effective management of sustainable fisheries and biodiversity conservation. The establishment of the Southern Indian Ocean Deepsea Fishers Association (SIODFA) and its unilateral designation of Benthic Protected Areas in that ocean are a tangible sign of awareness of these concerns and willingness to act.

The general adoption of the ecosystem approach is an additional factor of convergence between fisheries management and biodiversity conservation. During the CBD Southern Indian Ocean Regional Workshop to Facilitate the Description of Ecologically or Biologically Significant Marine Areas (EBSAs), held in Mauritius, (30 July–3 August 2012), two seamounts of the South West Indian Ridge (SWIR) were proposed as EBSA candidates.

FAO, IUCN and the CBD are actively collaborating in the parallel and complementary processes of definitions of EBSAs (through the CBD, supported by IUCN) and vulnerable marine ecosystems (VMEs) (through FAO).

IUCN is strongly committed to the goal of implementing effective protection and restoration of biological diversity and productivity and ecosystem processes and their sustainable and equitable use in areas beyond national jurisdiction (ABNJ) (including the water column and the seabed). IUCN also supports the establishment of a representative system of MPAs at regional and global scales, including in ABNJ.

The IUCN World Conservation Congress (WCC, Jeju, Republic of Korea, 6–15 September 2012) called on States, individually and as Members, to strengthen regional cooperation in ABNJ of the Southern Indian Ocean (SIO), particularly through the RFMOs, for:

- defining as a matter of urgency special protection measures, such as closures, for seamounts, as well as designation and effective management of MPAs and benthic protected areas;
- applying the Precautionary Principle and ecosystem approach in decision-making, fisheries management and mining management, and ensuring that activities are in conformity with relevant international commitments and resolutions;
- developing an overarching programme of activities for sustainable management of SIO seamounts;
- facilitating synergies between regional instruments and organizations, and particularly between SIOFA and CCAMLR for development of coherent MPA networks;
- ensuring that effective monitoring, control, surveillance and compliance and enforcement measures are implemented for all fisheries, in support of the long-term conservation and sustainable use of seamount biodiversity; and
- requiring the marine private sector and related high seas stakeholders to better integrate marine conservation and sustainable development priorities into fishing, maritime transport, mining, trade, energy, research and other activities with the potential to adversely affect the marine environment and its biodiversity in ABNJ.

The WCC also called on the IUCN Director-General to fully cooperate with the Members of IUCN, FAO, CBD, RFMOs, Regional Seas organizations, the European Union, the Indian Ocean Commission and other relevant environmental intergovernmental organizations (IGOs) and non-governmental organizations (NGOs), including conservation and industry associations, and the Global Environment Facility (GEF), to:

- accelerate progress on all aspects of the ecosystem approach to seamount management, particularly in the SIO;
- support coherence in decision-making through (facilitating) improved cooperation between sectors and competent organizations for regulating fisheries and other industry sectors and marine biodiversity conservation;
- contribute to an inclusive, participatory and transparent governance of human activities in the SIO on scales appropriate to the marine ecosystems;
- encourage new efforts of cooperation among the relevant competent organizations operating in the SIO to develop a process for ecosystem-based management of SIO seamounts;
- facilitate the initiation of a process in order to support sustainable management and conservation of SIO seamounts;
- strive for a better understanding of how various types of legal, economic and social

incentives may work for or against implementation of an ecosystem approach in the region;

- promote the fundamental human dimension of an ecosystem approach to food security, poverty eradication and sustainable development;
- contribute to capacity building, particularly for scientific and technical analyses, data exploitation and marine spatial planning; and
- document and share experiences on an ecosystem approach to marine ecosystem management, including lessons learned from successes and failures.

Project background

IUCN and its Members have a long-standing commitment to achieving effective protection, restoration and sustainable use of biological diversity and ecosystem processes in the high seas. This commitment was reiterated at the 2008 IUCN World Conservation Congress when, through Resolution 4.031 *Achieving conservation of marine biodiversity in areas beyond national jurisdiction*, IUCN Members called, *inter alia*, for the promotion of arrangements, processes and agreements that ensure the consistent, coordinated and coherent application of the best conservation and governance principles and approaches, including integrated ecosystem-based management and the precautionary approach. It was reiterated further at the 2012 World Conservation Congress which adopted resolutions regarding: (i) the protection of the deep ocean ecosystem and biodiversity from the threats of seabed mining (WCC-2012-Res-079-EN); and (ii) the implementation of conservation and sustainable management of marine biodiversity in ABNJ (WCC-2012-Res-074.EN). The latter calls on States acting individually or though multilateral organizations to promote consistent, coordinated and coherent application of the best conservation and governance principles and approaches, through actions to:

- promote the conservation of deep-sea biodiversity, implementation of UNGA resolutions and further assessment of biodiversity values in deep ocean areas, and the impacts of deep-sea exploration and mining operations (WCC-2012-Res-074-EN/2e);
- encourage mobilization of finance for ocean and regional seas conservation action, including the sustainable management of marine ABNJ, with priority given to seamounts, submarine canyons and other vulnerable marine ecosystems or EBSAs (WCC-2012-Res-074-EN/2g); and
- promote the strengthening or development of new agreements at the regional level to encompass the protection of the marine environment and conservation and sustainable use of marine biodiversity beyond national jurisdiction, including the development and implementation of regional MPA networks, where needed (WCC-2012-Res-074-EN /2h).

Regional cooperation on biodiversity conservation and sustainable use in ABNJ of the Southern Indian Ocean would benefit from the development of an overarching programme of activities for conservation and sustainable use of seamounts in the area that would aim at:

- **facilitating synergy** in decision-making between regional instruments and organizations, and more particularly between SIOFA and CCAMLR for the development of coherent management strategies, including MPA networks;
- **enhancing coherence** in decision-making through improved cooperation between sectors and competent organizations for regulating fisheries and other industry sectors and marine biodiversity conservation, and to develop a process for ecosystem-based management of seamounts;
- **requiring better integration** by the private sector and related high seas stakeholders of marine conservation and sustainable development priorities into fishing, maritime transport, mining, trade, energy, research and other activities potentially impacting the marine environment and its biodiversity in ABNJ;
- **applying good governance principles** and in particular inclusive, participatory and transparent processes at all the appropriate scales;

- **applying the Ecosystem Approach** (including the precautionary approach) in decision-making in fisheries, mining and other activities, ensuring their conformity with relevant international commitments and resolutions. This would involve: (i) developing a better understanding of how various types of legal, economic and social incentives may work for or against implementation of an ecosystem approach; (ii) adopting special protection measures such as effectively managed fishery closures and MPAs; and (iii) taking into consideration the human dimension of an ecosystem approach in relation to food security, poverty eradication and sustainable development;
- **ensuring compliance** through effective monitoring, control and surveillance (MCS) in all fisheries to support the long-term conservation and sustainable use of marine biodiversity;
- **building capacity**, particularly for scientific and technical analyses, data exploitation, MCS and marine spatial planning; and
- **documenting best practices** to share experiences on ecosystem approaches for marine ecosystem management, including lessons learned from successes and failures.

As part of this mandate, IUCN, in partnership with the United Nations Development Programme (UNDP), developed a medium-size project approved by the GEF in December 2008 entitled *Applying an ecosystem-based approach to fisheries management: focus on seamounts in the southern Indian Ocean* (hereafter termed the IUCN/GEF/UNDP SIO Project).

The project's overarching objective is to help improve marine resources conservation and management in the high seas. Biodiversity-rich areas of the SIO, with a particular focus on seamounts, have been chosen to serve as a testing ground. In particular, the project seeks to:

- identify conservation and management options based on a precautionary and ecosystem approach, applicable to areas in the high seas of the SIO, with particular regard to VMEs;
- identify options for managing deep-sea fisheries to prevent significant adverse impacts on VMEs (e.g. by gear-type, effort and/or area-based restrictions);
- identify appropriate monitoring, control and surveillance systems to ensure effective enforcement of and compliance with conservation and management plans;
- develop a model management framework for high seas biodiversity and important high seas areas in the SIO; and
- work in close collaboration with the fishing industry to ensure feasibility and cost-effectiveness of the measures, and maximum buy-in and future compliance.

The IUCN/GEF/UNDP SIO Project has four main components: (i) improving scientific understanding of seamounts in the SIO (e.g. through research cruises); (ii) improving the governance framework (e.g. through a legal gap analysis): (iii) developing a model ecosystem-based management framework for the area; and (iv) communications and outreach.

The project has highlighted the importance of the SIO Ridge seamounts for biodiversity, as well the urgent need for concrete measures for their preservation and sustainable management of their resources. The management of human activities in ABNJ is particularly critical and requires effective international collaboration in order to ensure their sustainability, safeguard marine biodiversity and productivity, and maintain ecological services.

Purpose of the document

This document is a product of the IUCN/GEF/UNDP SIO Project. Aimed at stimulating improved governance of biodiversity in the sub-region, it presents a draft **Road Map** and the process needed in the future to formally adopt and implement an integrated and collaborative **Biodiversity Management Plan** for the sub-region.

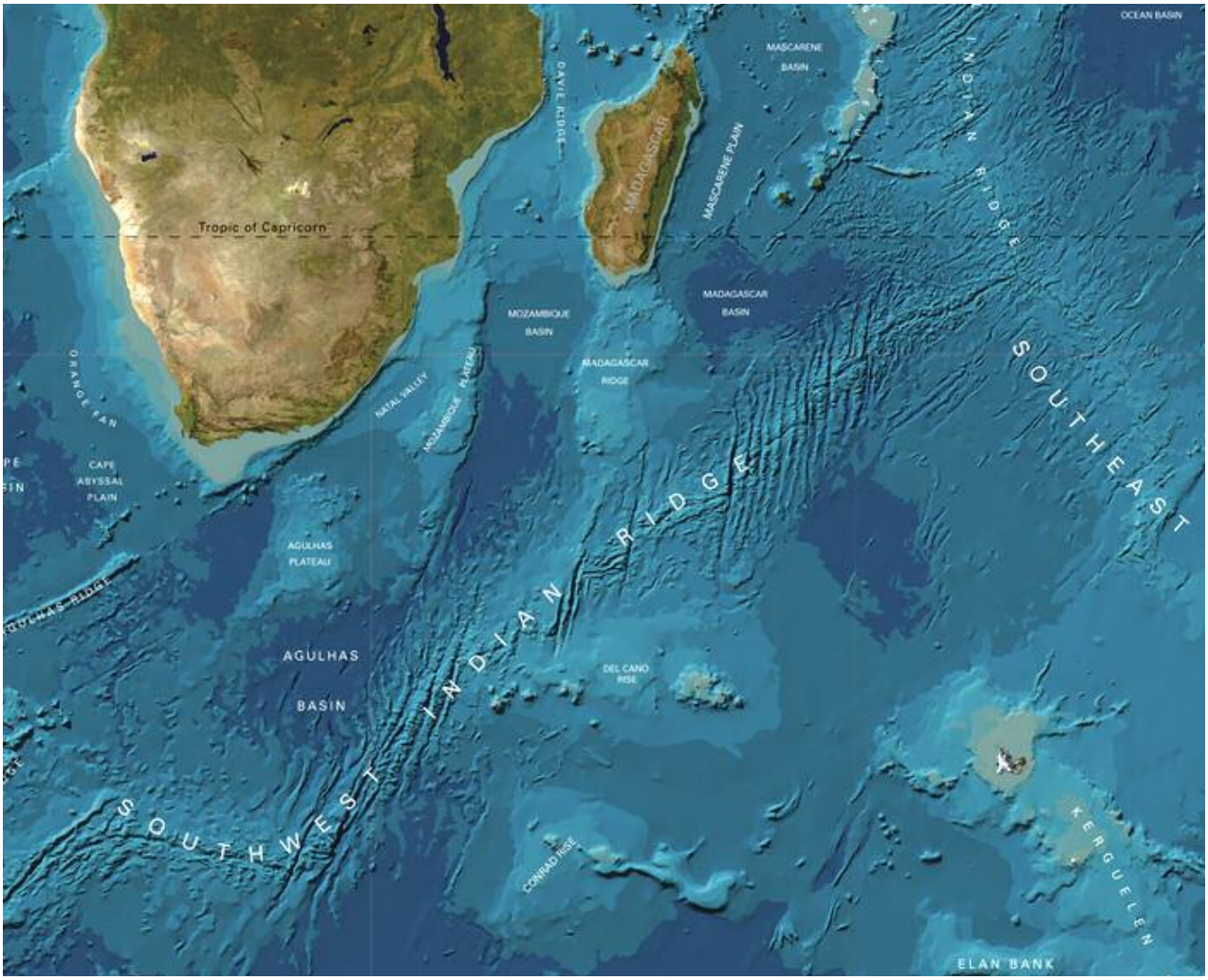
Structure of the document

The document briefly presents: (i) the **Biodiversity Initiative**; (ii) the principles,

objectives and process included in the draft **Road Map**; (iii) the concept, advantages and potential members of the **Alliance** proposed to further the Initiative; (iv) the **Collaborative Arrangement** needed to formalize the Alliance; and (v) the key elements of the adaptive and collaborative **Management Plan** that the Alliance will adopt and implement.

Target audience

This document is aimed generally at IUCN Members specifically interested in the governance of ocean biodiversity conservation and sustainable use. More specifically, it is aimed at all those potentially interested in joining, supporting and participating in the efforts of the IUCN/GEF/UNDP Biodiversity Initiative in the SIO, including neighbouring coastal States, other interested coastal States, international and regional organizations dealing with biodiversity, the relevant economic sectors, scientific institutions, NGOs and, last but not least, national and international financial institutions.



The Southern Indian Ocean, showing the Southwest Indian Ridge, the location of the proposed management area for the SIO Biodiversity Initiative. Source: GEBCO – www.gebco.net/data_and_products/gebco_world_map/images/gda_world_map_large.jpg

1. THE SIO BIODIVERSITY INITIATIVE

Within the framework of its IUCN/GEF/UNDP SIO Project, IUCN organized in Rome, on 16–17 July 2012, a Management Workshop (hereafter called the Rome Workshop) on conservation and management measures applicable to high seas areas in the SIO with the view to: (i) defining the different elements of a governance plan for the region (specific objectives; actors; actions required for its implementation); and (ii) discussing ways towards achieving an operational management plan for the SIO (develop considerations for an ecosystem approach; identify options for monitoring, control and surveillance, etc.).

The Rome Workshop recognized that developing an operational management plan for SIO biodiversity was impossible within the time and institutional frameworks available. It discussed, nonetheless, the process and actions that would be needed for the formal adoption and implementation of such a plan in the future.

The proposals outlined below stem directly from the discussions in the Rome Workshop, as well as from additional discussions between the collaborators involved in the preparation of this document.

1.1 Articulation of the SIO Initiative

The elaboration and implementation of a formal management plan in the specific regional context of the SIO is a complex endeavour in a challenging institutional environment. As no formal institutional management structure exists, a complex but pragmatic process is needed, for which the following components are proposed (Figure 1).

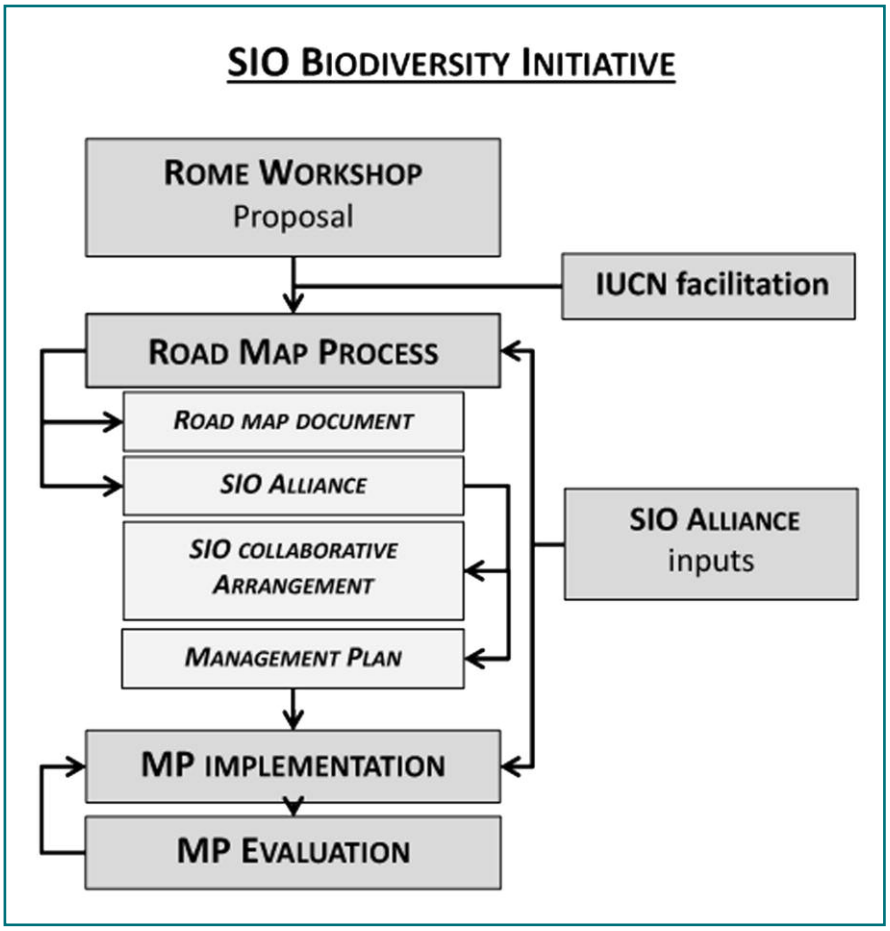


Figure 1: Components, processes and outcomes of the SIO Initiative

The Initiative provides the overall informal framework. It follows on and extends the efforts undertaken within the SIO Project. Institutionally benign and neutral, the SIO Initiative is informal and voluntary and it intends to promote integrated management of biodiversity in the SIO and to mobilize existing and potential interested parties for that endeavour. It serves as a reference point and holds together the first partners at this early stage of the process, while no other formal mechanism is yet established.

The final aim of the Initiative is to implement a voluntary Management Plan in a not-too-distant future. The elements needed include: (i) a Road Map; (ii) a SIO Alliance of partners; and (iii) a SIO Collaborative Arrangement among partners. These elements and their relationship are examined in more detail in the following sections.

The SIO Initiative partnership is open to new members, and prospective partners would be welcomed.

1.2 Principles of the Initiative

The SIO Initiative faces many important challenges as it develops in the ABNJ within an incomplete legal framework and a progressively strengthening institutional framework. It calls for an *ad hoc* Alliance of members with different operational statutes (from governments, the private sector and civil society) acting under a voluntary collaborative arrangement to produce, adopt and eventually implement a plan that will apply only to Alliance members and other parties voluntarily deciding to cooperate.

The principles underpinning the Initiative should be both simple enough to facilitate adhesion of the partners and clear enough to guide them in their endeavour. These principles, which are tentatively listed below, may need to be considered and modified as necessary, and then adopted by the partners in the Initiative. Some of these principles might also be included in the Collaborative Arrangement. They should, in that case, refer as much as possible to agreed international law instruments. They may include:

- **Duty to cooperate:** The Initiative draws on the duty of States to cooperate as required by the UN Law of the Sea Convention (LOSC) (in particular Article 118) and customary international law. Article 118 requires that: *States shall cooperate with each other in the conservation and management of living resources in the areas of the high seas. States, whose nationals exploit identical living resources, or different living resources in the same area, shall enter into negotiations with a view to taking the measures necessary for the conservation of the living resources concerned.*
- **Openness:** the Initiative is open to all parties, including coastal nations and fishing nations, that have an interest in the conservation and sustainable use of SIO seamount-related biodiversity. It will ensure full access to information by all partners and will encourage full participation of developing countries in the development and implementation of the Management Plan and other work;
- **Duty to promote sustainable and equitable use:** The Initiative draws on the UNCLOS obligation *to promote … the equitable and efficient utilization of their resources, the conservation of their living resources, and the … protection and preservation of the marine environment* (Preamble) and more specifically the *living resources and marine life* (Art. 1.4) … *the fauna and flora* (Art. 45.b) and the … *rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life* (Art. 194.5);
- **Biodiversity focus:** The Initiative targets specifically 'seamount-related biodiversity' in the SIO area, defined as all the resources (of fish and other species assemblages, and possibly genomes, connected to seamounts for their life cycle, and the related critical habitats required for the completion of such life cycles. It also includes examples of vulnerable seamount habitats to be conserved/protected for their representativeness;
- **Impacting activities:** The Initiative aims at considering all activities undertaken in the Benthic Marine Protected Area, focusing on those having (or likely to have) a significant adverse impact on seamount-related

biodiversity at present or in the foreseeable future;

- **Good governance:** The Initiative will promote good governance and in particular: (i) participation of the main interested parties; (ii) transparency and equity in task allocations, debates, decisions and outcomes; and (iii) systematic performance assessment.
- **Consensus decision-making:** As participation in the SIO Alliance, the Collaborative Arrangement and the Management Plan will be voluntary, decisions will be made by consensus;
- **Realism:** To facilitate its success, members of the Alliance will promote pragmatism over ideology, selecting objectives, approaches and measures that are realistic, taking into account the institutional context and means available for implementation, and applying the ecosystem and precautionary approaches; and
- **Broad participation:** Partners will work to ensure that developing countries in the region have full access to information and are encouraged to fully participate in the development and implementation of the Management Plan and other work.

The Initiative might also involve, in the future, more than just the Management Plan (introduced below), which can work as a hub for other activities and projects that contribute to the Plan's objectives. Such activities might include, for example, members' research programmes, specific activities of the IOTC, CCAMLR, IOC/COI) or complementary management plans in other areas, each wishing to retain their separate identities.

1.3 Goals of the Initiative

The goals of the SIO Initiative are:

- To promote the integrated management of seamount-related biodiversity and its sustainable use in the SIO – a model which may serve as an example for other regions;
- To facilitate the identification of potential partners for the SIO Alliance and to promote their adhesion to the Initiative as an open and informal platform for exchanges and discussion among all interested parties;
- To facilitate the inception of the nested Road Map and Management Plan processes and to promote the capacity of neighbouring developing coastal States to participate in such processes (data processing, research, management); and
- In the future, to host or connect to other initiatives in the region that may contribute to the above objectives.

1.4 Facilitation

Pending the formal establishment of a legitimate 'authority', the SIO Initiative serves as an informal, initial platform needed for the early phases of the process, before the Alliance is constituted and the Collaborative Arrangement is signed. It was suggested at the Rome Workshop that IUCN could take on this role. IUCN is already significantly involved through its participation in the IUCN/GEF/UNDP SIO Project and has the technical authority and legitimacy to promote the initiative with potential Alliance members, several of which have participated in the activities and workshops organized by the SIO Project.

The activities needed to prime the process might include:

- promotion of the Initiative with potential interested parties (see below) using direct IUCN channels, as well as side events at key international meetings and conferences;
- identification of potential funding sources to start up the Road Map process; and
- organization of an inception meeting (see below).

However, if and when the SIO Initiative starts attracting additional and related initiatives, other inter-partner agreements such as Memoranda of Understanding (MoU) might be needed for specific projects. Whether an institutional structure is needed to facilitate functioning of the Initiative may then be decided.

2. The Road Map

The Road Map is the document underpinning the process of participative development, adoption and implementation of the Management Plan. It is the document informally agreed among the partners. It details the objectives (related to those of the Initiative), the expected outputs, the partners in the endeavour and their individual roles (coordination, secretariat, funding, scientific activities, etc.), the means available, and the calendar of activities. The expected outcomes are:

- a voluntary Alliance of partners: the SIO Alliance;
- a Collaborative Arrangement between these partners: the SIO Arrangement; and
- a Management Plan formally adopted by the Alliance, under the SIO Arrangement: the SIO Management Plan.

Its process is a finite, catalytic activity that ends when the Management Plan has been formally agreed and signed. It does not require a long-lasting commitment from the parties. It is step-wise, pragmatic, simple, open and multi-sectoral. It builds up as new partners step in. Many elements of the Road Map document will be relevant also for the future Management Plan (e.g. those regarding boundaries, policy objectives, potential partners, relevant international collaborations). The Road Map will be a new type of instrument; the first of its type for States and international organizations is the Declaration on Collaboration for the Conservation of the Sargasso Sea, the adoption of which by the Sargasso Sea Alliance is expected in 2013.

Considering the urgency of the biodiversity situation in the SIO region, the process is expected to conclude, with a draft Management Plan elaborated, within one year after formalization of the Alliance.

The partners in the Initiative are *de facto* partners in the development and implementation of the Road Map, who subsequently may or may not eventually agree to become part of the Alliance (see below).

The establishment of the Western Indian Ocean Sustainable Seas Alliance (WIOSSA) followed a similar approach. The Alliance concept underwent a more formal development following its adoption as a 'way forward' by the countries of the WIO in April 2010. It has evolved slowly yet surely as more and more members signed up to the concept through non-binding bilateral agreements. At present, its members are formally considering the transformation of the WIOSS Alliance into a multilateral partnership with international status.

Similar evolutions are ongoing in the so-called 'Madeira Process', between the Convention for the Protection of the North-East Atlantic (OSPAR), the North East Atlantic Fisheries Commission (NEAFC) and other parties for the management of selected areas in the North-East Atlantic,[1] as well as in the Sargasso Sea Alliance development[2] (see also Box 1 on page 15).

2.1 Principles of the Road Map

The principles for the Road Map are the same as those listed for the Initiative, namely: (i) duty to cooperate; (ii) openness in membership; (iii) duty to promote conservation and sustainable and equitable use; (iv) focus on seamount-related biodiversity; (v) focus on management of impinging activities; (vi) good governance principles; and (vi) consensus decision-making.

2.2 Objectives of the Road Map

Similarly, the overarching goals of the Road Map are those of the Initiative. The more operational objective of the Road Map is to establish an implementable cooperation and coordination mechanism and process for the joint elaboration and subsequent implementation of an enforceable sub-regional Management Plan for the conservation and sustainable use of marine biodiversity in the SIO.

This implies a number of interconnected sub-objectives, such as:

- establishing the SIO Alliance composed of those parties having expressed their

[1] www.neafc.org/system/files/final-Madeira-II-January-2012-note-by-NEAFC.pdf
[2] www.sargassoalliance.org

willingness to contribute to and promote the general objective of conservation and sustainable and equitable use of seamount-related biodiversity in the sub-region;
- agreeing on a Road Map outlining the various steps needed to develop and agree on a Management Plan for seamount-related biodiversity in the SIO area;
- identifying and mobilizing the means needed to implement the Road Map;
- establishing a Secretariat to oversee the implementation of the Management Plan;
- defining and ranking the long-term policy objectives of the Management Plan;
- agreeing the geographical delimitation of the area to be covered by the Management Plan and the resources and habitats to be covered by the Plan;
- considering whether to seek an Advisory Opinion from the International Tribunal for the Law of the Sea (ITLOS) on the protection and sustainable and equitable use of biodiversity in ABNJ (a task for two or more States in order to clarify what is feasible);
- developing an 'inception programme' for incoming members, and mobilizing the means to develop the capacity of new developing country members to participate in the process.

2.3 The Road Map process

Being informal, the Road Map process could start immediately, for instance facilitated by IUCN and involving those partners already involved in the IUCN/GEF/UNDP SIO Project. In terms of logical priorities, the Road Map process should begin with an initial Alliance that can increase its partners as the project develops.

2.3.1 Funding the Road Map process

The identification of adequate funding is the sine qua non of the Initiative. Financial support (in cash and in kind) might come, for example, from:

- interested States, e.g. through project funds, assistance in cash or in kind (e.g. research capacity), or through their universities or development agencies;
- existing projects, e.g. IOC, ASCLME, SWIOFP, GEF-FAO ABNJ project in kind, through collaborations;
- GEF funds under International Waters Window (e.g. though a project extension or a new project);
- the World Bank, to promote sustainable use and investments;
- private foundations/institutions;
- the fisheries section, e.g. SIODFA; and
- environmental foundations.

Co-funding will be assured by the fact that the partners will fund their own participation in meetings and may contribute research surveys or data, as well as experts and technical contributions for meetings.

2.3.2 Inception meeting: establishment of the Alliance and the Road Map

As facilitator of the process, IUCN will organize the inception meeting. Participants will be invited by IUCN based on preliminary talks conducted with potential interested parties who recognize the need for conservation and sustainable and equitable use of SIO biodiversity. At the meeting, participants will discuss and agree on, *inter alia*, the general objectives of the Road Map, the timing, the operational support (i.e. a Secretariat), the supervision process, the necessary means, the roles of the different parties in the process, and the rules of procedure. Given the amount of ground to be covered, more than one meeting might be necessary to finalize the content of the different elements of the Road Map. The commitments of the different partners will be outlined in the Collaborative Arrangement (see below).

Those participants who decide to be part of the Road Map implementation process will constitute the Alliance, which will formally adopt the Road Map. At this point, the Alliance will become effective and operational and able to make decisions regarding implementation. The Alliance will remain open to new partners – partners that IUCN, assisted by other Alliance members, will encourage and support.

Meetings of the Alliance may be attended by observers who, having gained an understanding of the objectives of the Alliance, the role they might play and the contribution they could make, may eventually themselves become members.

2.3.3 Agreement as to aims and objectives

To ensure that members of the emerging Alliance can agree upon its aims and objectives, a number of different approaches are possible. One such approach (adopted by the Sargasso Sea Alliance) could be the drafting of a 'Mission Statement' to which all parties would commit. Another (adopted by the SWIO Alliance) could take the form of an exchange of MoUs. And a third approach could involve the drafting of a formal Collaborative Arrangement which sets out the intentions of the different partners in relation to the implementation of the Management Plan. As some of the members may not have international legal personality, such an agreement would not be governed by international law, a situation that could be circumvented via a mutual exchange of MoUs.

2.3.4 Elaboration and adoption of the Management Plan

Drawing up and adopting the Management Plan constitutes a key activity of the Road Map. To complete the participative process leading to the agreement on and signing of the Plan, a series of technical meetings and consultancies will be needed (see Section 4).

2.3.5 Proposal for adjudication by ITLOS

This document proposes that, during the Road Map process, two or more Parties to UNCLOS request an adjudication by the International Tribunal on the Law of the Sea (ITLOS) on the 'Relationship between Marine Protected Areas and Fisheries in Areas Beyond National jurisdiction' (see Annex 1). This innovative approach would require a specific treaty agreement between the Parties envisaging such a referral to ITLOS.

3. THE SIO ALLIANCE

3.1 The alliance concept

The governance and management of biodiversity in the SIO can now more efficiently move forward through a voluntary association of existing institutions from interested States and other interested parties (e.g. from among the private sector and civil society) in the form of an Alliance.

Similar in concept to the Sargasso Sea Alliance or the Western Indian Ocean Sustainable Ecosystem Alliance, the SIO Alliance assumes a partnership (see membership criteria below) of: (i) governments; (ii) international institutions, such as RFMOs and Regional Seas organizations); (iii) scientific institutions; (iv) international marine conservation groups; and (v) private sector donors. These partners will wish to collaborate in the protection and sustainable use of the biodiversity of the Southern Indian Ocean. The partnership will aim to mobilize support from a wide variety of national and international organizations and governments to ensure the success of the Initiative. More specifically, it aims at implementing an SIO Management Plan. Founded on a (still to be decided) Collaborative Arrangement (see below), the duration of the SIO Alliance would be tied to that of the Arrangement. Membership of the Alliance would be open-ended, allowing new members to join as the Initiative develops.

The SSA and WIOSEA initiatives have similar aims but important contextual differences that affect their respective evolution. Although the WIO Alliance started earlier, it has taken longer to reach realization. A significant reason for this has been the differences in geopolitical alignment of the two areas and the absence or presence of mandated IGOs. The SSA area involves one country (Bermuda), its territorial and EEZ waters, and a surrounding area of the high seas. WIOSEA involves ten countries with their various sovereign waters (with some still unresolved boundary issues), as well as ABNJ and new areas of joint management of the extended continental shelf. In the Western Indian Ocean region the IGOs (which include the Nairobi Convention parties, several fishery commissions and agreements, and neighbouring coastal states) are much more sensitive about the participation of non-mandated parties (many of which are from outside the region) in policy decisions, even though they see the value of such an Alliance at the scientific level, including access to research vessels, monitoring, training, etc. These considerations should be kept in mind in developing the SIO Alliance and its programme.

3.2 Advantages of the alliance concept

The Alliance is conceived as open and flexible. This section is strongly inspired from the description of the WIOSEA Alliance[3]. The 'alliance' concept may provide the following advantages:

- A simple coordinating and facilitation mechanism working through a Steering Committee and a Secretariat or Coordination Unit, ideally operating as part of an existing institution with interests or responsibilities in the region. It represents a much lighter commitment and burden than the establishment of a new institution to underpin the management of biodiversity, such as a formal regional commission covering potentially the high seas and part of EEZs and extended continental shelves;
- The full recognition and engagement of existing mandates and entities (Conventions, Commissions, Associations, projects, etc.) which may already be involved in, or responsible for many of the management and governance activities in the sub-region;
- An open platform aiming at facilitating synergies, sharing of experience, common projects etc. among its members, as well as with similar initiatives such as the SSA or WIOSEA;
- A more efficient and timely coordination within and between countries and various entities with interests in the region which will reflect positively through more efficient use of human resources and more cost-effective use of limited funds (thereby reducing the growing strain on national and regional human resources in the face of increasing demand);

[3] **www.swiofp.net/documents/SWIOFP4/asclme_swiofp_proposed-alliance_english-email.pdf**

- A strong, well-organized and united focus for leveraging further funding to enhance existing activities and to provide additional funding for identified 'gaps' in priority activities; and
- A working mechanism/foundation for implementation of an agreed Management Plan for the targeted area and its biodiversity.

3.3 Types of actors for the Alliance

The Road Map process intends to be open and highly participative. Successful implementation will require the active participation of *States with real interest* (in the sense of the UN Fish Stock Agreement, Part III Article 8). Not all the actors involved in the Road Map process need also to be actors in the implementation of the Management Plan. Table 1 (page 17) lists some of the key reasons why the potential actors would be interested in participating in the process.

3.3.1 Interested States and their institutions

The interests of States and their institutions in participating in the Alliance and the fulfilment of its objectives might include:

- **Geographic proximity** – i.e. neighbouring coastal States directly bordering the

Box 1: The Sargasso Sea Alliance (SSA)

The Sargasso Sea Alliance (see Figure 2) is a partnership led by the Government of Bermuda, in collaboration with scientists, international marine conservation groups and private donors, who all share a vision of protecting the unique and vulnerable ocean ecosystem of the Sargasso Sea. It aims to mobilize support from a wide variety of national and international organizations and governments to ensure legal protection for this critical ecosystem, and to provide insights for the establishment of other Marine Protected Areas on the high seas. It has four key objectives:

- **To build an international partnership that will secure recognition of the ecological significance of the Sargasso Sea and the threats that it faces;**
- **To use existing regional, sectoral and international organizations to secure a range of protective measures for all or parts of the Sargasso Sea to address key threats;**
- **To establish a management regime for the Sargasso Sea; and**
- **To use the process as an example of what can and cannot be delivered through existing institutions in areas beyond national jurisdiction.**

The SSA is led by the Bermuda Government. Its partners include: IUCN, IUCN-WCPA, Mission Blue, Marine Conservation Institute, Woods Hole Oceanographic Institution, Atlantic Conservation Partnership, Bermuda Institute for Ocean Sciences (BIOS), Bermuda Underwater Exploration Institute (BUEI) and WWF International.

It is a loose alliance of like-minded bodies which have informally bought into a common Mission Statement and appear together on the Alliance website. The leadership of the Government of Bermuda is based on an initial approach to the Prime Minister by IUCN followed by a series of Cabinet Decisions. The only agreement in writing is the Collaboration Arrangement with the OSPAR Secretariat and a similar agreement is planned with the Abidjan Convention. An inter-ministerial meeting is planned for March 2013 among States from around the Sargasso Sea, as well as range States of some of its iconic species, and with relevant international organizations, to endorse the text of a *Hamilton Declaration for Collaboration for the Conservation of the Sargasso Sea*. It is envisaged that these steps will lead to a State-based Collaboration Arrangement and the establishment of a 'Sargasso Sea Commission' based in Bermuda as a Bermuda-based institution funded by a trust fund.

Source: www.sargassoalliance.org/about-the-alliance

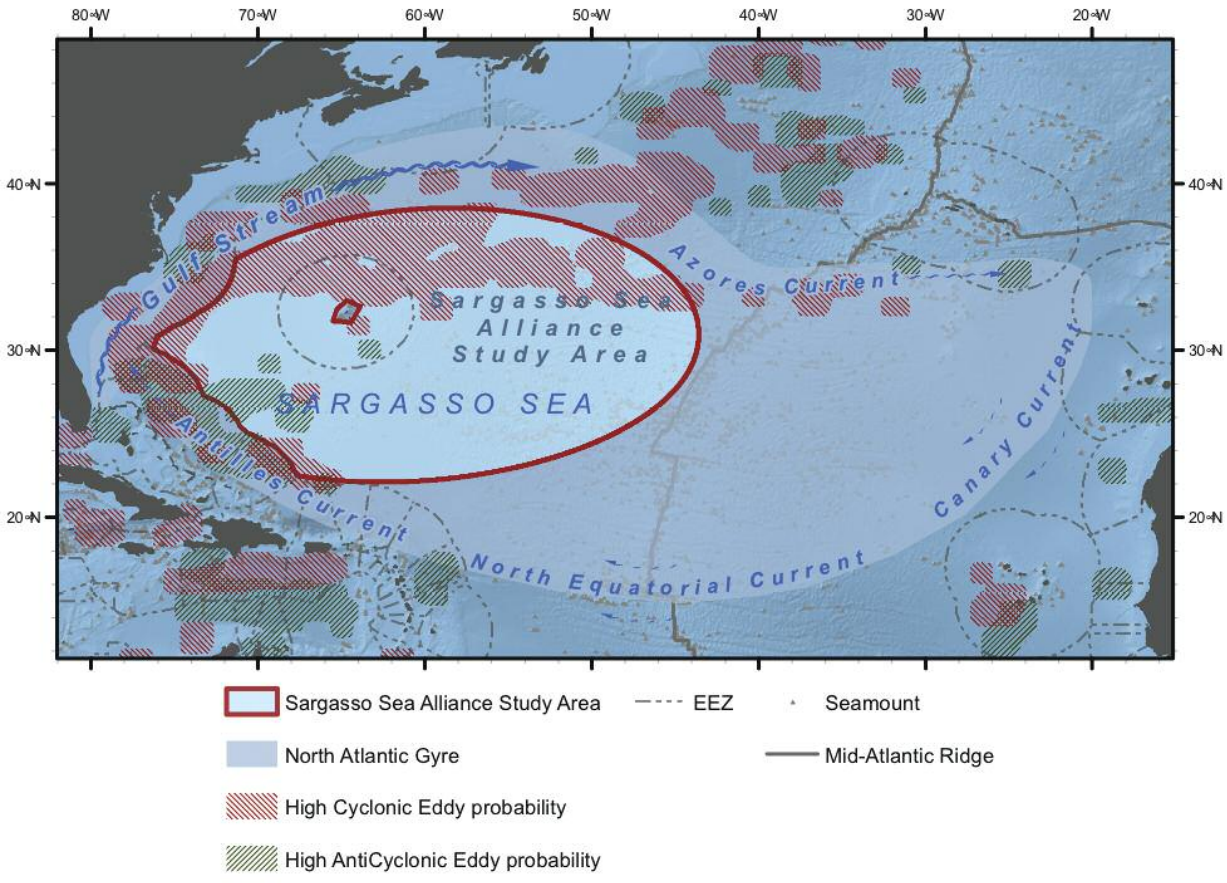


Figure 2: The Sargasso Sea Alliance area (www.sargassoseaalliance.org, 28/09/2012)

management including, for example, Madagascar, Mauritius, Seychelles, South Africa, France;

- **Resource extraction** – i.e. fishing States (flag States); mining States with exploratory and other licenses or planning to ask for them; States with interest in marine genetic resources;
- **Scientific research** in VMEs which are poorly studied at present and may be critical in transoceanic connectivity of marine biota. Interested institutions might include seamount research institutions, e.g. in South Africa, United Kingdom, France (Ifremer) and perhaps also Australia (AIMS, CSIRO) or New Zealand (CenSeam, NIWA);
- **Ecosystem conservation** – e.g. for their intrinsic value or as providers of ecosystem services, including their role in (and resilience to) climate change and other threats and factors of change; and
- **Other interests** – e.g. States whose flag vessels transport goods through the area, whose companies lay communication cables in the Management Plan area, or that depend on the shipment of goods through the Alliance area; States that are involved as Port States in the transit of products extracted in the Management Plan area.

3.3.2 Multilateral organizations

The Secretariats of the organizations who have responsibility in the management area, particularly if they conduct work there, might be interested in collaborating, directly or through their projects. For example, the following organizations might become involved in one or more of the roles as indicated below:

Table 1: Types of interest justifying the participation of potential actors in the BMRM

Party		Type of interest*
States		Sovereign rights; geographic and political interest; sustainable use; conservation; research
Multilateral organizations		Development; management; sustainable use; conservation; research
Civil society	Industry & related NGOs	Livelihoods; sustainable use; management; conservation
	Environmental NGOs	Conservation; preservation; sustainable use; research; education
	Academic institutions	Research; conservation; sustainable use; information

*Sustainable resource use includes use, management and long-term conservation

- ASCLME – information on the wider ecosystem, scientific collaboration, mobilization of coastal countries. Experience regarding the development of an Alliance;
- CBD – provision of norms and scientific and technical advice on biodiversity; EBSAs; national MPAs:
- CCAMLR – fisheries resources and biodiversity;
- CITES – eventual trade controls on species at risk of extinction due to international trade;
- CMS – in cases where migrating species are threatened in the MPA;
- FAO – fisheries norms; Code of Conduct for Responsible Fisheries; Compliance agreement; fisheries in ABNJ; EAF; GEF-FAO ABNJ project or the FAO-NANSEN project (co-financing, scientific collaboration);
- GEF – potential co-funding institution through its International Waters Window; collaboration between the ASCLME project and the Alliance; provision of information on the wider ecosystem; scientific collaboration; mobilization of coastal countries;
- IMMS – International Marine Minerals Society;
- IMO – guidance on navigation issues; establishment of a Particularly Sensitive Sea Areas (PSSA);
- IOC/COI – facilitation of collaboration among Comoros, Madagascar, Mauritius, France (for Réunion) and the Seychelles, particularly in scientific research and MCS;
- IOC-UNESCO Intergovernmental Oceanographic Commission – scientific collaboration and data handling; experience in species protection and area-based conservation;
- IOTC – fisheries and tunas and related species;
- ISA – deep seabed mining and related marine environmental conservation, which is much broader than biodiversity conservation and which ISA must handle for the area under UNCLOS;
- ITLOS – on request, e.g. to advise on biodiversity protection and fisheries in ABNJ;
- IUCN – scientific advice; guidelines; process facilitator;
- Nairobi Convention (UNEP) – environmental matters within EEZs and potentially beyond;
- SWIOFP – GEF supported, aims at ecological management and sustainable use of the South-West Indian Ocean's marine resources. Promotes LME ecosystem-based approach to fisheries. Involves Kenya, Comoros, Mozambique, South Africa, United Republic of

Box 2: The Western Indian Ocean Sustainable Ecosystem Alliance (WIOSEA)

The process of establishing a Western Indian Ocean Sustainable Ecosystem Alliance emerged through collaborative activities of the UNDP-GEF Agulhas and Somali Current Large Marine Ecosystems Project (ASCLME) and of the South West Indian Ocean Fisheries Project (SWIOFP) in 2010. Building on the partnerships already established, the idea was endorsed in subsequent ASCLME-related meetings. The original concept for this Alliance was to be broad enough to encompass both policy and managerial level, as well as scientific and technical.

However, during the negotiation process it became clear that the countries felt that an Alliance of Partners that was inclusive beyond the countries and the mandated intergovernmental organizations (IGOs) would not be acceptable as the countries and IGOs wished to maintain their decision-making powers and role separate from any other entities. Consequently, the concept of the Alliance was refocused to the scientific and technical level alone. The remit given to the ASCLME project is now:

1. To negotiate and enable a formal Alliance of scientific partners and collaborators working within the region based on existing bilateral agreements between ASCLME and other parties;
2. To formulate and adopt a five-year Ecosystem Monitoring and Science Programme for the region and to identify the specific areas of cooperation and responsibility that each of these Alliance partners can agree to adopt (including any gaps);
3. To develop a five-year Programme for Capacity Building and Training and to identify potential partnerships within the Alliance to deliver such a Programme at both the national and regional levels;
4. To develop a science-based governance mechanism that can translate the results of scientific studies, research and monitoring into reliable management guidelines and policy advice for the countries of the region; and
5. To identify a long-term coordination and reporting mechanism to support this Alliance and its partnership process within the region that is sustainable beyond the finite lifetime of such projects as the ASCLME Project.

The SSA is led by the Bermuda Government. Its partners include: IUCN, IUCN-WCPA, Mission Blue, Marine Conservation Institute, Woods Hole Oceanographic Institution, Atlantic Conservation Partnership, Bermuda Institute for Ocean Sciences (BIOS), Bermuda Underwater Exploration Institute (BUEI) and WWF International.

Existing partners in the Alliance include UN Oceans agencies, NGOs, IGOs, internationally recognized scientific and research institutes (e.g. IRD, NIOZ, NOAA) and the marine private sector via the World Ocean Council. It is important to note that the large marine ecosystem (LME) concept, by definition, extends beyond EEZs and sovereign territories so that this Alliance would also have to address ABNJ as would the Ecosystem Monitoring and the Science-Based Governance programmes.

Source: Director of ASCLME (pers. comm.). Resolution of the 9th Meeting of IOGOOS/CLIVAR and the 3rd meeting of SIBER. 15–19 October 2012, Cape Town, South Africa.

Tanzania, Mauritius, Seychelles, France and the World Bank (**www.swiofp.net**);

- OSPAR and NEAFC – sharing experience in protected areas in ABNJ;
- RFMOs – fisheries management, including straddling and highly migratory stocks:
  - SIOFA – direct competence on fisheries in ABNJ;
  - CCAMLR – for populations straddling the CCAMLR area and the Management Plan area;
  - IOTC – for large pelagic species connected to seamount structures; and
  - SWIOFC – for populations straddling out of EEZs into the Management Plan area;
- UNDP – partner in the present IUCN/GEF/UNDP SIO Project;
- UNEP – guidance on environmental matters; MPAs; integrated space-based management;
- UN-DOALOS – for matters related to UNCLOS implementation;
- UNGA – as a global policy-making institution; and
- World Bank – provision of information through the Global Partnership on Oceans and its SWIOFP project.

3.3.3 Civil society

The role of civil society is important in modern governance. Civil society institutions with expertise relevant to the area, its resources and ecosystems would be welcomed and might include: environmental conservation organizations; companies and associations involved in fishing (e.g. SIODFA), mining (e.g. IMMS); shipping, communication cables; and academic institutions (e.g. WIOMSA) as source of local expertise; other institutions could include the World Ocean Council as an interface with ocean industry.

3.4 The SIO Collabrative Arrangement

As discussed above (in 2.3.3), members of the Alliance would agree as to its aims and objectives either by formally accepting a Mission Statement or by agreeing to become parties to a Collaborative Arrangement. This would be a non-legally binding agreement, signed by all members of the Alliance, to implement together the Biodiversity Management Plan. It morally engages only its signatories. A draft structure of the Management Plan, as referred to below, could be part of the Arrangement.

Given the long-term nature of the objectives of the Alliance, the Collaborative Arrangement is intended to be a long-lasting instrument, requiring constancy and coherence on the part of its signatories to its commitments and actions. Additional members might be added over time.

4. THE BIODIVERSITY MANAGEMENT PLAN

The Management Plan will contain the details of the agreement among the members of the Alliance and define their joint action. Its structure will be determined by the Alliance. The Plan will be a long-term commitment among the partners aiming at conservation and sustainable use of biodiversity in the designated area. A typical comprehensive plan structure is given in Box 3. Some elements are treated in more detail below. Drafted and signed by Alliance members, its implementation will require a long time frame and a high level of commitment from the parties involved.

4.1 Objectives of the Management Planning process

The general objective of the Management Plan is to elaborate an implementable Plan for the protection, conservation and sustainable use of seamount-related biodiversity in the designated area. This requires a series of sub-objectives, to include for example:

- agreement on policy goals driving the Management Plan and on its operational objectives, indicators and reference values;
- compilation of technical and spatial information on resources, habitats and activities; assessment of their present state and trends; identification of bio-ecological and socio-economic threats and issues requiring action;
- selection of a strategy to deal with such threats; examination of alternative management approaches; selection of one or more approaches (depending on available resources); identification of the measures needed, including protected areas;
- clarification of the respective differentiated roles of the SIO Alliance members in implementing the Management Plan and enforcing its measures, in line with their respective mandates;
- establishment of a data collection and scientific assessment process, and formalization of the performance assessment process (actors involved, timing, resources needed);
- clarification of the measures (controls, penalties) that might be applied according to international law;
- identification of the means available for such implementation and their partitioning among the members of the SIO Alliance; and
- maintenance of a flow of information between the Secretariat and the partners, as well as among partners.

4.2 Selected elements of a Managemernt Plan

The Management Plan will be developed within the Road Map process in a highly participative and science-based way. Its exact content will depend on the boundaries selected and on the agreed objectives of the Plan. The following are therefore suggestions for what might be considered in the Plan's development process by the Alliance; they are not intended to preempt that process in any way.

4.3 Principles of the Management Plan

The principles guiding the development of the Management Plan include those expressed at a higher level for the SIO Initiative itself (see Section 1). In addition, more operational principles could be adopted that have direct implications for the elaboration process, the approaches used and the measures taken; e.g. (i) sustainable use; (ii) the precautionary approach; (iii) the ecosystem approach; (iv) the participative approach; (v) a subsidiarity principle, leaving the action at the level (or with the institution) where it can best be conducted; (vi) multi-sectoral; (vii) formal assessment of performance; and (viii) adaptive.

4.4 Title of the Management Plan

The Management Plan needs a specific title to distinguish it from others that might be established in the same region and elsewhere. Since no specific title was proposed by the Rome Workshop, the following components for a title are suggested:

- **Type of area** – refer to the Management Plan's designated area as a 'Marine Managed Area' (MMA) and not as an MPA; this would help to assure the highest rate of buy-in possible and avoid confusion with MPA reserves (the MMA may – and most probably will – contain, *sensu stricto*, MPA reserves

Box 3: Indicative structure of an operational management plan

Preamble and overarching considerations
List of acronyms
Definitions
1. **Title of the plan**
2. **Management plan overview**
3. **Scope of the plan**
   a. Designation of the regulatory area(s)
   b. Ecosystem(s) included in the area
   c. Resources included in the area
   d. Activities to be managed
   e. External stressors
4. **Management responsibility: which institution is in charge?**
5. **Legal framework: what laws apply?**
6. **Institutional and governance framework: which institutions participate? With what roles?**
7. Policy issues, principles and goals
   a. Main issues: preferably ranked
   b. General principles
   c. Policy goals: related to issues and ranked
8. **Policy implementation strategy**
   a. Sustainable and equitable use
   b. Conservation of biodiversity
9. **Implementation approaches**
   a. The precautionary approach
   b. The ecosystem approach
   c. Protected areas
   d. Good governance: participation, transparency, etc.
10. **Management planning process**
    a. What process was used to develop the plan?
    b. Who was involved?
    c. How were decisions made?
11. **Management framework**
    a. Management tasks: what do we need to do?
    b. Operational objectives: what do we want to achieve? By when?
    c. What are the constraints? What are the accepted limits of what we can do and of what is tolerated?
    d. Management measures and expected outcomes
12. **Scientific assessment framework**
    a. Ex-ante assessment
    b. Recurrent monitoring and evaluation
13. **Means of implementation**
    a. What means are available?
    b. Identify sources of sustainable financing
14. **Management roles**
    a. Who does what?
    b. Who is responsible for what?
15. **Monitoring, control and surveillance**
    a. Monitoring
    b. Control and surveillance
    c. Penalties, conflict resolution, courts and appeal
16. **Performance assessment and tactical adaptation (short term)**
17. **Auditing and strategic adaptation (medium to long term)**
18. **Communication, mobilization and outreach**
19. **Other questions to be considered by the plan's developers**

together with fishery reserves, buffer zones, sustainable use areas etc.). The Great Barrier Reef zoning scheme, adapted to the seamount context, could be taken as an example of large-scale multiple-use zoning.

- **Geographic name** – this will depend to a large extent on the boundaries selected by the Alliance (see below).
- **Management target** – use the term 'seamount-related biodiversity' so as to include deep-sea benthic species (of interest to SIOFA and SIODFA), pelagic species (IOTC), seabirds (CCAMLR and ACAP), cetaceans (IWC) and pinnipeds.
- **Plan purpose** – include the terms 'sustainable and equitable use' and 'conservation'.

4.5 Plan boundary: possible delimitations of the designated management area

The Alliance will decide on the geographical boundaries of the area to be covered by the Management Plan. There is a connection between the actors joining the Alliance (and their respective areas of interest) and the geographical boundaries of the Plan; in particular, whether or not the Plan will cover parts of EEZs or extended continental shelf. Such boundaries should try to encompass the interests of all concerned, but pragmatism will be needed to reach an acceptable compromise between comprehensiveness and feasibility – particularly of data collection, monitoring, control and surveillance.

The Rome Workshop discussed the various delimitations that could be conceived. Looking at the possible options, workshop participants noted that a number of potential areas of progressively larger extension could be nested as follows:

a) The five seamounts closely studied by the IUCN/GEF/UNDP SIO Project on the South West Indian Ridge and the single feature on the Madagascar Ridge;
b) The SWIR from the Central Indian Triple Junction to the boundary with CCAMLR;
c) As in (b) but including the Madagascar Ridge and Walter's Shoal, and also the portion of the SWIR lying within the CCAMLR area;
d) All ridges within the area under management of SIOFA; and
e) All seamount and submarine plateau features in the Indian Ocean, including the Ninety East Ridge for which a large proportion lies outside the SIOFA area and which is known to be subject to deep-sea fishing.

The Rome Workshop indicated that the most favourable and logical area for the first iteration of the Management Plan would be the area already covered by the IUCN/GEF/UNDP SIO Project: that is, the SWIO from its junction with the Central Indian Ridge to the border of the CCAMLR management area and the Madagascar Ridge, including Walter's Shoal (see polygon in Figure 3). It also considered that the area covered by the Management Plan could initially be limited and extended progressively as new members and new interests become involved in the Initiative and the Alliance.

4.5.1 Biophysical considerations

The seamounts that could raise the maximum interest for the Management Plan among members of the Alliance are located along the Southwest Indian Ridge and the Madagascar Ridge. The SWIR crosses a major oceanographic boundary marked by the closely spaced Sub-Tropical Front, the Agulhas retroflection and the sub-Antarctic Front. As the SWIR crosses this oceanographic boundary, the southernmost seamounts (e.g. Coral) are in sub-Antarctic waters and the northernmost ones (e.g. Atlantis) in sub-tropical waters, with those in between (e.g. Middle of What, Melville and Sapmer) lying in a very complex boundary region characterized by eddies and loops in the frontal system and highly variable oceanography (Reid *et al.*, in submission). Further north, the waters become gradually less productive. From a biophysical point of view, it may therefore be sensible to consider:
(i) managing the whole SWIR as one management unit; or (ii) dividing the SWIR into two units lying, respectively, in subtropical and sub-Antarctic waters.

The Madagascar Ridge and the deep-water areas of Walter's Shoal appear to share at least some aspects of the biology of the SWIR with which it is closely connected, and its inclusion into the management area could also be considered, especially given the fisheries targeting lobsters (Jasus spp.) and other species in the area.

4.5.2 Biogeographic considerations

Decisions regarding boundaries will need to take account of the distribution of important (and threatened) biodiversity, hotspots, critical habitats, and movements. The work being done to identify EBSAs (through IUCN and CBD) and VMEs (through FAO) will be useful in that respect.
For pelagic ecosystems lying over the seamounts, a well-defined biogeographic boundary is located at the sub-Antarctic Front. Here the pelagic communities change in terms of composition and acoustic structure. The benthic communities undergo a less well-defined change, with some Antarctic species penetrating as far north as Middle of What Seamount (e.g. *Muraenolepis* spp.). The fauna are understudied but seem partially related to that of the South African slope, with some elements more widespread, being found also in the Southwestern Pacific (e.g. *Solenosmilia* spp., *Dermechinus* spp.), and others only described from the Southwestern Indian Ocean (e.g. a large proportion of ophiuroids). The hydrothermal vent fauna of the Dragon hydrothermal vents appear to represent a mix of elements from the Indian Ocean (scaly-foot

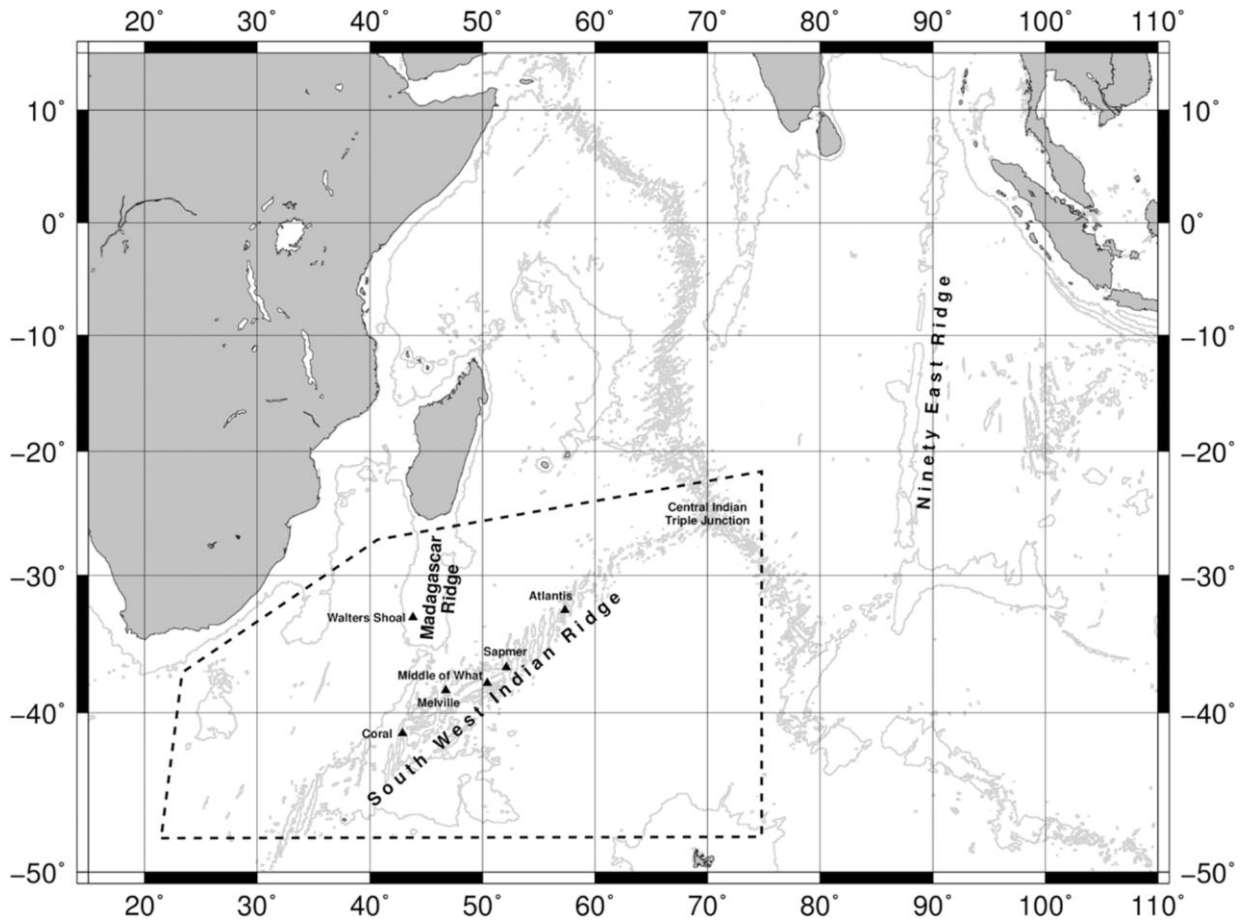


Figure 3: The Southern Indian Ocean and significant seamount structures. The polygon (dotted line) indicates roughly the area suggested during the Rome Workshop as a potential candidate area for the future Management Plan. (Source: courtesy of P. Boersch-Supan Philipp, University of Oxford & St Andrews. Bathymetry from the GEBCO Digital Atlas 2003.)

gastropod; *Rimicaris karei*) and elements related but not identical to species from the Southern Ocean (yeti crab and peltospiroid gastropod). Genetic studies on the scaly-foot gastropod indicate a lack of genetic connectivity between the South West Indian Ridge and the vents on the Central Indian Ridge. Again, this demonstrates that the region is biogeographically complex, with distinctive faunal groups and populations being determined by the presence of different water masses, productivity regimes and complex bottom topography.

4.5.3 Linkages with other ecosystems

The borders of any ocean ecosystem are permeable in that matter, biomass and other factors can and do cross them. It would be useful to identify the potential factors that may cross boundaries (in and out) and to take these external drivers and exports into account. Examples might be large ocean predators that cross the region on an annual basis as part of migrations to feeding or breeding areas.

The SWIR lies within the western part of the sub-tropical gyre of the Southwestern Indian Ocean (along with the Madagascar Ridge). The southern part the SWIR lies in the sub-Antarctic waters of the Southern Ocean. The ridge appears to be an important feature with regard to predator populations within the region. For example, Antarctic seabirds feed along the ridge, including species – such as white-chinned petrel and wandering albatross – listed on the IUCN *Red List*. Fur seals, probably from South Africa, have also been observed on the ridge. The SWIR also lies on the migratory pathway for cetaceans between Madagascar/East Africa and the Antarctic; humpback whales, sperm whales and other species were observed on the 2009 cruise over the ridge (Rogers *et al.*, 2009).

Strong biophysical coupling between the benthic and pelagic ecosystems over the seamounts is likely to have a strong influence on fisheries in the region. These include both demersal fish resources directly targeted by deep-sea fishing companies and pelagic fisheries for tuna. At wider geographic and even temporal scales, the SWIR is likely to be an important stepping stone for connectivity of southern hemisphere oceanic species, particularly the so-called West-Wind Drift species (e.g. *Jasus* spp., *Helicolenus mouchezii* and other fish species) and also species associated with 'southern' cold-water coral communities (e.g. *Solenosmilia variabilis*). It may also be important in terms of acting as a reservoir of recruits for Antarctic commercial species, such as Patagonian toothfish (*Dissostichus eleginoides*). Some tropical reef-dwelling species (e.g. *Ostracion cubiceps*) have also been recorded on some of the seamounts and so the seamounts may also function as stepping stones for the dispersal of these species.

4.5.4 Existing and potential threats to biodiversity

It is necessary to clearly identify the threats to be managed within the Management Plan and, in particular, to identify areas that are: (i) already irremediably damaged; (ii) potentially recoverable; (iii) of high economic activity; (iv) of high risk of damage from future human activities; and (v) as yet unexploited. A difficulty might arise if the seabed and water column of concern/interest are different. Also connections between the surface and the bottom will need to be accounted for, especially as the bentho-pelagic coupling is strong on seamounts in general and in the SWIR in particular.

The SWIR is subject to bottom trawling, gill netting and potting for a variety of species, including orange roughy (*Hoplostethus atlanticus*, alfonsino (*Beryx splendens*; *Beryx decadactylus*), *Jasus* spp. and possibly sharks. Pelagic systems may be targeted for tuna, especially in the northern part of the ridge. Information on existing fisheries is available from some fishing companies (e.g. those associated with SIODFA) but other fisheries are unreported and unregulated. Bottom trawling and other fisheries are closely associated with the seamounts themselves. Mid-water and surface pelagic communities extend over much larger areas around and between the seamounts and may involve a large part of the Indian and Southern Oceans (e.g. in the case of tuna fisheries).

4.5.5 Existing governance arrangements

The northern part of the SWIR and the high seas portion of the Madagascar Ridge come under the

management of SIOFA. The Crozet and Prince Edward islands[4] hotspots touch the SWIR and so part of the ridge of interest may be included within the French and South African EEZs in the region. Further south, the SWIR is under management by CCAMLR. A section of it adjacent to Bouvet Island must be under management by the Government of Norway. Tuna fisheries over the ridge are overseen by the Indian Ocean Tuna Commission. Exploration for seabed mineral resources for the SWIR is overseen through the International Seabed Authority which has signed exploration contracts with several entities. For the SWIR, the main contractor is the China Ocean Mineral Resources Research and Development Association (COMRA) of the People's Republic of China.

The Management Plan will cover mainly ABNJ but may also include parts of EEZs or continental shelves if agreement has been reached with the relevant coastal State or States, and if compatibility between measures taken in the various jurisdictions is assured.

Members of the Alliance will need to decide whether or not to include pieces of their jurisdiction in the Management Plan. For example, Seychelles and Mauritius have agreed on the extension of their respective continental shelves. Could they also reach agreement on the management of the biodiversity in the superjacent waters?

4.6 Legal and institutional arrangements

The legal frameworks and relevant institutions from the region include: UNCLOS, UNFSA, CCAMLR, SIOFA, SWIOFC, IOTC and CBD. At the regional level there is no implementation agreement of the UNCLOS to deal with biodiversity in the ABNJ, although general conservation obligations apply. A collective body (e.g. an 'Alliance') could be established to advise the parties concerned and coordinate decisions. Bilateral MOUs could be used to specify the collaborations needed. Implementation would be done in line with each partner's mandate and international law.

The Rome Workshop noted that the inaugural meeting of SIOFA may be an opportunity to identify some of the most likely players.

4.7 Description of the management area

The management area will be described briefly, focusing on the features that determine the Management Plan's targets and approaches, e.g.: (i) oceanography; (ii) productivity; (iii) important biodiversity elements; (iv) important, vulnerable and threatened species and communities; (v) important sub-ecosystems; (vi) ecosystem functions (nursery, feeding, reproduction, migration paths, etc.); (vii) vulnerable habitats (EBSAs) and threatened habitats (VMEs); (viii) threats from economic activities, both land-based and sea-based; (viii) threats from climate change; (ix) present state of the system; and (x) outlook (likely future threats and evolution).

4.8 Description of the management targets

There will be an overlap (and, it is hoped, as close a match as possible) between the area covered by the Management Plan and the living resources and habitats it intends to deal with. The Plan should list the species and key assemblages and types of ecosystems included in the area, the geomorphological structures of interest, and so on. It will have to be decided whether genetic resources are included in the Plan, taking into account the practical implications.

Given that the Management Plan will be jointly implemented by the partners within their terms of reference, it will be both convenient and necessary to design compartments of the resources corresponding to the mandates of the partners. To optimize international cooperation, it will also be important to identify components that 'fall between the cracks' (i.e. gaps), as well as overlaps (e.g. species falling under two or more jurisdictions/mandates depending on the approach taken) or 'duplications'.

The resources that might be considered for conservation include benthopelagic fish such as

[4] See Koubbi, Crawford, Alloncle *et al.*, 2012. Estimating the Biodiversity of Planning Domain 5 (Marion and Prince Edward Islands – Del Cano – Crozet) for ecoregionalisation. WG-EMM-12/33 Rev. 1. Available at **www.ccamlr.org/en/wg-emm-12/33-rev-1**

orange roughy, pelagic armourhead (*Pseudopentaceros richardsoni*), alfonsino, sharks, and other species such as cardinal fish, snake mackerel and scabbard fish. Shellfish to be considered include the lobsters *Jasus* spp. and *Projasus* spp.

The Management Plan may also refer to the protection of some important geomorphological features such as seamounts, hydrothermal vents, fracture zones and parts of the abyssal plain.

Remarkable benthic biological communities might include cold-water coral reefs (e.g. Coral Seamount, Middle of What Seamount), coral /sponge gardens (Melville Bank, Middle of What, Atlantis Bank), hydrothermal vent communities (Dragon Vent Field) and mixed communities of sponges, brachiopods, corals and sea pens on cliffs (Atlantis Seamount, Coral Seamount).

4.9 Description of past, present and potential activities

Current activities are rather limited, particularly in the area concerned, but an effort will need to be made to describe them, their trends, potential development and impact. The industries concerned include fisheries (fleets, gears, target species, associated and dependent species, catches, discards), mining of oil, gas and minerals (direct impact and contamination) and other activities such as navigation and tourism, as well as discharges from vessels.

Unsustainable practices and threats (present and potential) arising from each of the activities should be listed, and the evidence of risk given as a means to increase legitimacy and justify the management costs. The description should cover known and suspected impacts (direct, indirect, instant, cumulative) and include best scientific evidence, the identification of uncertainties, and calculation of risk.

In describing the activities to be covered by the Management Plan, the Alliance will need to be aware of the consequences of formally taking them up in the Plan, in terms of implementation, complexity and manageability.

4.10 Objectives of the Management Plan

The Management Plan will list all the high-level policy goals to which it contributes (see Section A) as well as the specific objectives stemming from the detailed descriptions of the resources, activities and threats. This includes:

- promotion of international cooperation on sustainable use of biodiversity;
- sustainable and equitable use of benthic and demersal biodiversity on seamounts;
- sustainable and equitable use of pelagic biodiversity;
- protection of endangered species;
- protection of important vulnerable habitats (to sustain resources and protect biodiversity); and
- protection against unsustainable/destructive practices.

It is important to note, in considering the objectives of the Plan, that each objective calls for an indicator, a target (desired level), a limit (undesirable level), measures and monitoring. Since some objectives might be contradictory or conflicting, objectives will need to be formally ranked (e.g. based on a risk analysis).

4.11 Activities to be managed

The economic and other activities affecting (or likely to affect) the ecosystems will need to be monitored and managed. The list of activities to be kept under monitoring, and possibly control, will depend on the mandates of the partners in the Alliance. In accordance with the level of importance given to them at international level, fisheries should be among the key activities to be monitored and managed. Other activities will need to be considered by the Alliance as appropriate.

4.12 Financing and mechanisms

Financing is one of the most important concerns for management sustainability. The Management Plan should therefore specify the necessary budget and the sources of funding available.

5. Final considerations

The Road Map needs to be kept simple and practical, and should be locally driven (e.g. by the interested parties from the region or those operating in it). Its development and implementation should follow a step-by-step approach and should identify short-term, middle-term and long-term action. The adaptive Management Plan might be tested first in pilot projects before being scaled up. Effective international cooperation is essential and while the full process may take some time, it is important to make a start and to show that implementation is feasible.

The role of IUCN in kick-starting the process will be fundamental. IUCN should be assisted in the task by the fact that many of the potential partners in the Alliance are already cooperating under the framework of the GEF/UNDP/IUCN SIO Project.

The voluntary Alliance will pool the competencies available in the region and optimize cooperation with a view to establishing the Alliance and having the Management Plan drafted as soon as possible. The governance approach could follow similar efforts in the ASCLME region and in the Sargasso Sea, their experience being beneficial in this regard.

In addition, many of the principles involved and issues to be addressed are common to initiatives dealing with marine spatial planning and integrated coastal management, and knowledge (e.g. on best governance practices) can be drawn also from these initiatives.

To be fully successful, the outcomes of the Initiative must go beyond improvement of current data and available science.

In order to address cumulative impacts, the Initiative needs to bring in the economic sectors (at present or potentially) impinging on biodiversity and drawing benefits from the services it delivers. Participation in assessments and decisions will therefore be a key concept. There is a real intention from SIODFA to cooperate and this augurs well for the future. Other sectors will be approached.

The recent coming into force of SIOFA (in 2012) opens an invaluable opportunity to develop an effective management regime if that institution can strengthen its capacity. Cooperation between SIOFA and IOTC would help to deal properly with the bentho-pelagic coupling of the ecosystem processes. Similarly, cooperation between SIOFA and CCAMLR should help in dealing with the North-South coupling of processes (e.g. predation).

Communication, mobilization and outreach will be very important at all stages of the Initiative, in particular to promote and activate regional pride in an important initiative on conservation and sustainable/equitable use of biodiversity. The Initiative should empower coastal States and facilitate a transfer of science and technology, build effective capacity (in governance and management) and promote fair access to resources.

A number of questions were not fully touched on during the Rome Workshop and may have importance for the Management Plan. One is climate change and the additional challenge it brings to the region. The respective roles/functions of EBSAs and VMEs need to be finally clarified and their interaction in the region optimized, keeping in mind that EBSAs, in dealing with all sources of impact, have a broader role to play than VMEs.

The response of ITLOS to the eventual request made by Alliance members should help clarify the articulation of existing legal and institutional frameworks in dealing with biodiversity in ABNJ.

Last but not least, the Initiative cannot start to make progress without appropriate funding. Therefore one of the most important tasks of IUCN, assisted by its Members, will be to raise the funding necessary to conclude the Road Map and start implementing the Management Plan. That Plan should also identify long-term sources of funding.

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Annex 1: Proposal for adjudication by the International Tribunal for the Law of the Sea on the relationship between Marine Protected Areas and fisheries in areas beyond national jurisdiction (ABNJ)

Text elaborated by P.A. Verlaan

Introduction

Areas beyond national jurisdiction (ABNJ) are an integral part of the marine environment. An effective, coherent ecosystem approach to marine environmental protection (MEP) must include ABNJ. It must also include a mechanism to manage them. The search for a global mechanism to manage ABNJ occupies a substantial proportion of international marine environmental governance activity, but a way forward in the relevant international fora has so far proven to be elusive. Therefore, a regional focus on a 'local' ABNJ adjacent to and/or included in a regional marine environment/resources governance arrangement/agreement, and/or on an ABNJ-MEP/resources arrangement/agreement in its own right, presents a promising alternative avenue to explore. The SIO seamount project could provide this regional focus.

Implementing management plans for the marine environment and resources of ABNJ, of which enforcement of marine protected areas in ABNJ are a crucial subset, is an urgent global oceans issue. Lest IUCN's efforts to establish the SIO Marine Protected Area (MPA) in ABNJ become a Sisyphean exercise, finding a mechanism to secure international compliance with that MPA is the immediate, principal challenge confronting this ambitious initiative.

The problem

The problem is the lack of clarity in international law of the extent of the so-called high seas freedom of fishing right (set out in Article 87(1) (e) before the comma) of the 1982 Law of the Sea Convention (LOSC) in light of the restrictions on that freedom set out in: (i) LOSC Article 87(1) (e) after the comma; (ii) LOSC Article 87(2); (iii) LOSC Articles 116-119; and (iv) LOSC Part XII on MEP.

Consequently, Member States of regional arrangements and agreements for the management, protection, conservation and sustainable development of marine resources, fisheries, environment and biodiversity, with jurisdiction over ABNJ, are uncertain of their right to enforce compliance in ABNJ with their rules on MPAs and other MEP, living resources, biodiversity measures against: (i) non-parties to the relevant regional arrangement/agreement, but parties to the LOSC; and (ii) non-parties to the LOSC.

Without certainty about their right to enforce compliance, Member States will not enforce it, and without compliance enforcement, MPAs and other MEP/living resources measures for ABNJ are useless. It is imperative that this law of the sea issue be authoritatively resolved at the earliest opportunity.

Proposal

Authoritative resolution is best obtained from an appropriate international tribunal. It is proposed that this matter be submitted for adjudication in the first instance to the International Tribunal for the Law of the Sea (ITLOS). From my reading of the LOSC and the ITLOS Rules of Procedure (I am not an expert on dispute settlement), it would appear that two options are available: (i) a **non-binding Advisory Opinion**; or (ii) a **binding decision**, constraining only on the parties and only for the matter in question.

To obtain a non-binding Advisory Opinion, at least two LOSC parties, preferably but not necessarily in this instance, parties to SIOFA[5] (i.e. as of 16 June 2012, Cook Islands, European Union, Mauritius, and Seychelles) must enter into an agreement that: (a) relates to the purposes of the LOSC; (b) specifically provides for the submission to ITLOS of a request for such an

[5] The Southern Indian Ocean Fisheries Agreement (SIOFA) entered into force on 21 June 2012.

opinion; and (c) specifically authorizes a specific body to make the request (ITLOS Rules of Procedure Art. 138). This agreement should be brief and straightforward to draft.

To obtain a binding decision (as qualified above), two possibilities exist:

(i) At least two (again preferably but not necessarily) LOSC/SIOFA parties must: (a) enter into a special agreement specifying that adjudication from the ITLOS is sought on the matter by instituting proceedings before the ITLOS; and (b) stating their consent thereto. Finally, at least one of the parties thereto must notify the ITLOS accordingly (ITLOS Rules of Procedure Art. 55). This agreement should also be brief and straightforward to draft.

(ii) At least one (again preferably but not necessarily) LOSC/SIOFA party must make an application to the ITLOS indicating: (a) the party making it; (b) the party against which the claim is brought; and (c) the subject of the dispute (ITLOS Rules of Procedure Art. 54(1); Article 54(2) sets out further required contents of the application). As it is assumed that the adversarial nature of this second option will not be favourably viewed by potential applicants for ITLOS adjudication of this matter, this option is not developed further here.

Other considerations

The parties may consider requesting adjudication by one of the ITLOS special chambers (fisheries or marine environment) rather than by the full ITLOS; this would enable a speedier outcome. However, in the present case, where both fisheries and marine environmental issues are involved, the attention of the full ITLOS is likely to be required and probably to be preferred.

The procedure is likely to be more complicated if the applicants are not also SIOFA parties.

If State-parties involved with this project/SIOFA agree to take the lead as proposed, IUCN could provide the substantive and administrative support mechanism to manage the case itself. Framing of the specific questions to be posed will depend on the option chosen and the parties involved.

Conclusion

Achieving its objective to develop and implement a *fully enforceable* management framework for MPAs in ABNJ would enable IUCN's SIO seamount project to offer the global community the first complete regional model for maintaining clean, healthy and biologically diverse oceans and seas, qualities that are essential to sustainable use. Spearheading the initiative to obtain a decisive statement of the international law as proposed in this paper would provide practical support for IUCN's endeavours to promote MEP and the designation of MPAs in ABNJ in other fora, strengthen the abilities of regional seas conventions and of regional fisheries management organizations/arrangements to enforce their provisions against non-parties, and further enhance IUCN's status as a substantive force that actively contributes to setting the agenda on marine environmental issues, regionally and internationally.

Annex 2: Selected Rio+20 ocean commitments of relevance to the SWIO Biodiversity Management

Summarized by Kristina M. Gjerde
IUCN Global Marine and Polar Programme

In brief, commitments and recommitments were made to (headers added):

158. Healthy oceans, ecosystem and precautionary approaches:[6] … "We therefore commit to protect, and restore, the health, productivity and resilience of oceans and marine ecosystems, and to maintain their biodiversity, enabling their conservation and sustainable use for present and future generations, and to effectively apply an ecosystem approach and the precautionary approach in the management, in accordance with international law, of activities impacting on the marine environment, to deliver on all three dimensions of sustainable development."

159. UN Convention on the Law of the Sea: We urge countries to implement their commitments under UNCLOS.

160. Capacity building: We recognize the importance of building the capacity of developing countries to be able to benefit from the conservation and sustainable use of the oceans and seas and their resources, and in marine scientific research and transfer of marine technology.

161. UN Regular Process: We encourage consideration by States of the findings of the assessment Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including socio-economic aspects.

162. Biodiversity beyond national jurisdiction:[7] … We commit to address, on an urgent basis, the issue of the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction including by taking a decision on the development of an international instrument under UNCLOS during UNGA 69.

163. Marine pollution: We commit to reduce pollution on marine ecosystems, including through implementing relevant IMO relevant conventions and follow up of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities and other relevant initiatives. We commit to take action by 2025 to achieve significant reductions in marine debris.
164. Alien invasive species: We commit to implement measures to prevent the introduction of, and manage the adverse environmental impacts of, alien invasive species including, as appropriate, those adopted in the framework of the IMO.

165. Sea level rise and coastal erosion: We call on the international community to enhance its efforts to address the challenges of sea level rise and coastal erosion particularly in developing countries.

166. Ocean acidification and climate change: We call for support to initiatives that address ocean acidification and the impacts of climate change on marine and coastal ecosystems and resources. We need to work collectively to prevent further ocean acidification, as well as enhance the resilience of marine ecosystems and of the communities whose livelihoods depend on them, and to support marine scientific research,

[6] Preambular text to paragraph 158: We recognize that oceans, seas and coastal areas form an integrated and essential component of the Earth's ecosystem and are critical to sustaining it and that international law, as reflected in United Nations Convention on the Law of the Sea (UNCLOS), provides the legal framework for the conservation and the sustainable use of the oceans and their resources. We stress the importance of the conservation and sustainable use of the oceans and seas and of their resources for sustainable development, including through the contributions to poverty eradication, sustained economic growth, food security, creation of sustainable livelihoods and decent work, while at the same time protecting biodiversity and the marine environment and addressing the impacts of climate change.

[7] Full text of paragraph 162: We recognize the importance of the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction. We note the ongoing work under the UN General Assembly of an Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction. Building on the work of the *ad hoc* working group and before the end of the 69th Session of the United Nations General Assembly we commit to address, on an urgent basis, the issue of the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction including by taking a decision on the development of an international instrument under the United Nations Convention on the Law of the Sea.

monitoring and observation of ocean acidification and particularly vulnerable ecosystems.

167. Ocean fertilization: We resolve to continue addressing with utmost caution ocean fertilization, consistent with the precautionary approach.

168. Restoring fish stocks: We commit to intensify our efforts to meet the 2015 target as agreed to in JPOI to maintain or restore stocks to levels that can produce maximum sustainable yield on an urgent basis. Including to:

- intensify efforts urgently to maintain or restore fish stocks to levels that can produce at least MSY by 2015, to do so,
- suspend catch or fishing effort,
- manage by-catch,
- eliminate destructive fishing practices,
- enhance actions to protect vulnerable marine ecosystems, incl. effective use of impact assessments.

169. Implementing fishing agreements: We urge States Parties to fully implement their commitments in the UN Fish Stocks Agreement and for all to implement the FAO Code of Conduct for Responsible Fisheries and the FAO International Plans of Action.
170. IUU fishing: We recommit to eliminate IUU fishing (JPOI) including by:

- national and regional plans under IPOA-IUU,
- coastal, flag, port state and charter state measures, and state of beneficial owners and others, by identifying vessels engaged in IUU fishing and by depriving offenders of the benefits accruing from IUU fishing,
- cooperating with developing countries to identify needs and build capacity, including support for monitoring, control, surveillance, compliance and enforcement systems.

171. IUU fishing: Speeding up ratification of the FAO Port State Measures agreement.
172. RFMO performance reviews: We recognize importance of transparency and accountability in RFMOs and publicly available regular performance reviews. We encourage implementation of recommendations and recommend strengthening of the comprehensiveness of reviews.

173. Eliminating subsidies: We reaffirm out JPOI commitment to eliminate subsidies that contribute to illegal, unreported, and unregulated fishing and overcapacity taking into account the importance of this sector to developing countries including through:

- the prohibition of fisheries subsidies that contribute to overcapacity and over-fishing,
- encouraging States to further improve the transparency and reporting of existing fisheries subsidies programmes through the WTO,
- encouraging States to eliminate subsidies that contribute to overcapacity and over-fishing, and
- refraining from introducing new such subsidies or from extending or enhancing existing such subsidies.

174. Fisheries capacity building: We urge efforts by 2014 to strengthen the capacity of developing countries to conserve and sustainably manage and realize the benefits of sustainable fisheries, including through improved market access.

175. Small-scale fisheries access: We commit to observe the need to ensure access to fisheries, and the importance of access to markets, by subsistence, small-scale and artisanal fisherfolk and women fish workers, as well as indigenous peoples and their communities, particularly in developing countries, especially small island developing States.

176. Coral reefs: We recognize significant contributions of coral reefs and their vulnerability to e.g., climate change, ocean acidification, overfishing, destructive fishing practices and pollution. We support international cooperation as well as technical collaboration and voluntary information sharing.

177. MPAs: We reaffirm the importance of area-based conservation measures, including MPAs, as a tool for conservation of biological diversity and sustainable use of its components and note the Aichi target of 10% of oceans by 2020.

About IUCN

IUCN, International Union for Conservation of Nature, helps the world find pragmatic solutions to our most pressing environment and development challenges.

IUCN works on biodiversity, climate change, energy, human livelihoods and greening the world economy by supporting scientific research, managing field projects all over the world, and bringing governments, NGOs, the UN and companies together to develop policy, laws and best practice.

IUCN is the world's oldest and largest global environmental organization, with more than 1,200 government and NGO members and almost 11,000 volunteer experts in some 160 countries. IUCN's work is supported by over 1,000 staff in 45 offices and hundreds of partners in public, NGO and private sectors around the world.

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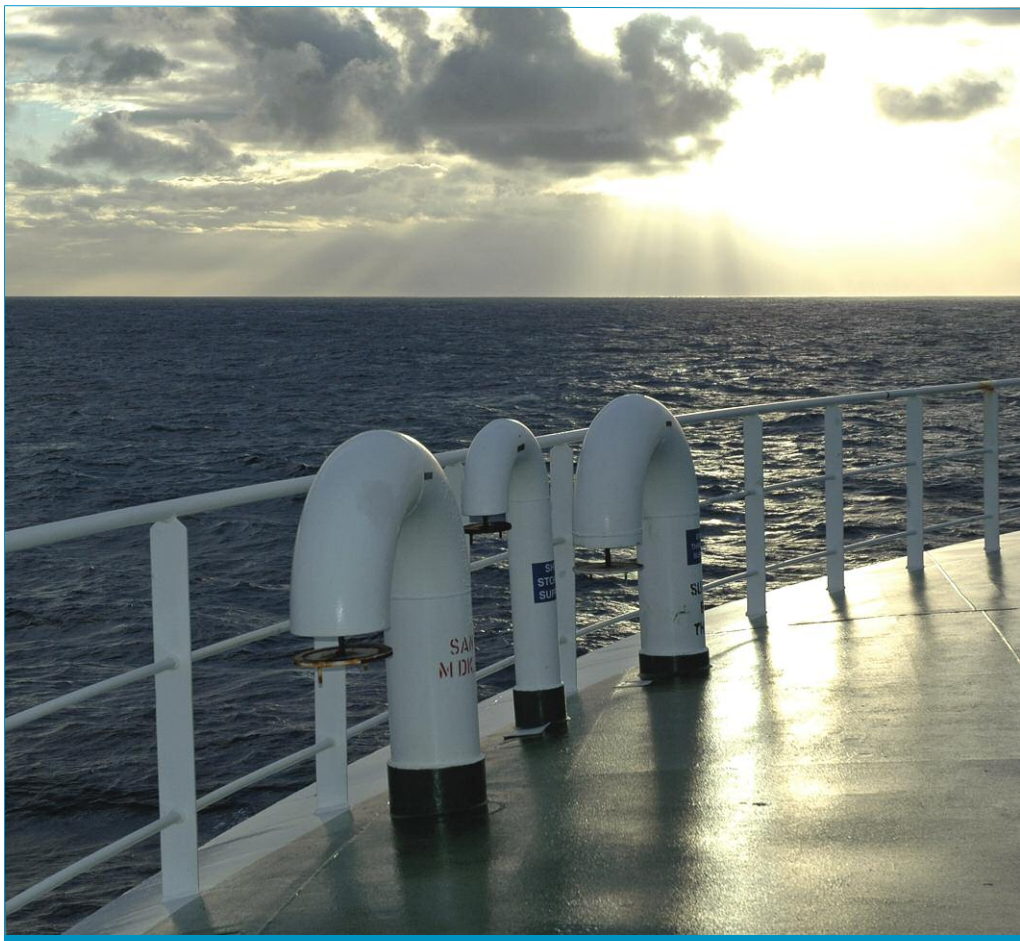

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